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Organization: Naval Research Laboratory

Title: Terrain Properties and Topography  
from Skylab Altimetry

Period Covered: Monthly Progress Report, July 1974

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Principal Investigator: Allan Shapiro

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Technical Monitor: Larry York  
NASA Johnson Space Center  
Code TF6  
Houston, Texas 77058

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(E74-10784) TERRAIN PROPERTIES AND  
TOPOGRAPHY FROM SKYLAB ALTIMETRY Monthly  
Progress Report, Jul. 1974 (Naval  
Research Lab.) 2 p HC \$4.00 CSCL 08E

A summary of the data analysis of four terrain passes has begun. The summary consists of a catalogue that compares the available radar signature with the available ground truth for each observed area. To permit statistical estimates, and smooth the jitter of the AGC and Range Tracker loop, the basic footprint of each observed area has been increased to 15 km along track, with the cross track diameter remaining at about 8 km. The radar signature consists of (a) the received power, (b) the topographic height, (c) the rise time and trailing time of radar return, and (d) the maximum autocorrelation coefficient. The corresponding ground truth consists of (a) vertical extent of footprint, (b) type of terrain, (c) location, and (d) amount of precipitation. Accessory data gives Pass number, date of observation, operating submode, and frame number. The catalogue incorporates corrections to AGC due to (1) error in calibration at JSC, and (b) calibration correction for waveform of point target.

This work will continue in the next reporting period,  
and results will be prepared for final report.